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(54) ACCESS TIME BAND-BASED DISPLAY INFORMATION CONTROLLER

(57)Abstract:

PROBLEM TO BE SOLVED: To display the necessary information in order of higher significance regardless of the circuit load and to always obtain the proper information by selecting the proper information content based on the information storing the past histories and displaying the information at a user terminal in a short time.

SOLUTION: An information providing server device 100 controls the providing of information and contains a main memory 102 and a disk device 104. The device 104 includes an access frequency table 200, an information providing priority table 300, an access frequency comparison table 400, an access time band-based circuit congestion table 600, etc. In addition, a display 108 and an input device 110 are used for the management and control of the data stored in an information providing controller. A communication device 112 performs the communication with a client 120 via a public circuit 130. When a user receives

the information providing service, the client 120 instructs the device 100 to send the information providing data to the user.

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[Date of extinction of right]

CLAIMS

[Claim(s)]

[Claim 1] A control unit with the function which accesses the information displayed on the display which displays the information offered from said information offer control unit and which controls proper amount of information for every time amount, and displays.

[Claim 2] The control device in which said information offer control device had ****** which attaches the priority of the data which make information offer and classifies low ** with a high priority according to access to information.

[Claim 3] The control unit equipped with the function in which said information offer control unit inputs modification of a priority.

[Claim 4] The control unit with which said information offer control unit changes and displays provided information on the proper amount of data by measuring the priority of provided information, and the congestion factor of a circuit.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] With respect to a system to offer information, especially as for this invention, the sink side of information offer is related with the information offer control unit with which a display can perform information efficiently.

[0002]

[Description of the Prior Art] the time zone which accesses information in the system to offer information which leads, retrieves required information, chooses a computer and displays it -- moreover -- that the time amount to display becomes late by the amount of data which the information itself has **** -- circuit time amount -- going out -- a time-out -- carrying out -- **** -- there are things and the approach of increasing the amount of circuits and the device which lessen the amount of data itself beforehand and transmit are performed as countermeasures.

[0003] As one of them, it considers as the approach of lessening the amount-of-information [itself] amount of data, it is at the transmitting time, and in case image data with much amount of data is compressed beforehand and delivery and its data are displayed, it is carrying out performing data elongation.

[0004] In addition, about data with informational high display frequency, there is the approach of displaying only required information by registering the information which a user demands in advance.

[0005] Moreover, there is also the approach of corresponding by enlarging the size of the pass of the amount of circuits.

[0006]

[Problem(s) to be Solved by the Invention] There are the following problems in

the conventional technique expressed above.

[0007] Although the main gestalten of information offer have many offer approaches accompanied by image data and text data, it may depend for them on the load profile initiation of the circuit at the time of access as a display speed.

[0008] By the aforementioned approach, the approach of compressing the amount of information of the data itself and elongating must choose the above-mentioned processing, and must perform it according to information to give a display demand.

[0009] Depending on the attribute of the data which the data display rate itself displays, the approach of registering the information which a user demands in advance and displaying does not become for being solved, when there is much amount of data, such as image data.

[0010] For the user who receives information offer, it is the [0011] the above result always. [same]

[Means for Solving the Problem] With reference to the information which is accumulating the past access hysteresis, the information offer control unit which controls the information displayed with an access-time band by this invention chooses proper amount of information by the time zone, and displays information on a user's terminal for a short time.

[0012] Proper amount of information here shows the range which is applied for a

long time and which there is much amount of information and does not carry out a time-out from a circuit into an access request, or is not displayed.

[0013]

[Embodiment of the Invention] Hereafter, one example of this invention is explained using a drawing.

[0014] Drawing 1 is drawing showing the system configuration of the information offer control server equipment which applied this invention.

[0015] In drawing 1 , 100 is information offer server equipment which controls information offer. 102 is main memory, 104 is a disk unit, and the access frequency table 200, the information offer priority table 300, the access frequency comparison table 400, the circuit congestion factor table 600 classified by access-time band, etc. are stored in the disk unit 104. 108 is a display, 110 is an input device, and it is used for management of the data in an information offer control device, and management of control. 112 is a communication device and performs the communication link with a client through a public line 130.

[0016] Moreover, 106 is a control unit which controls these [all].

[0017] 120 is a client which receives information offer. 122 is a communication device with which main memory and 124 perform a disk unit and 126 performs the communication link with information offer server equipment, and a display

130, a loudspeaker 132, and an input device 124 use the contents of the directions actuation to information offer server equipment, and information offer for an output. 128 is a control unit which controls these clients. However, this configuration is an example and may have other configurations. A pocket mold terminal is also considered as a thing without a loudspeaker, or KURAIATO. As a correspondence procedure, using others, a satellite and CATV (Cable Television), and the enclosure (Local Area Network) of LAN is also assumed.

[public line]

[0018] In this example, when a user receives communications service, from a client 120, shall direct to a server 100, information offer data shall be made to send, and a server side shall perform record of an access situation, adjustment of the informational amount of data offered.

[0019] In drawing 2 , 200 is an access frequency table and the informational category provided with ID from which 202 discriminates information, and 204, and 206 are area which stores the access frequency to the report contained in each category.

[0020] In drawing 3 , 300 is an information offer priority table and it is the area where the priority used when displaying the information by which, as for 302, the class of information category and 304 are contained in a category name, and 306 is contained in a category is stored.

[0021] In drawing 4 , 400 is an access frequency comparison table and is stored in the disk unit 104. The class of category and 404 make it as a category name, and 406 makes 402 the expected value of access frequency.

[0022] In drawing 5 , 500 is a circuit congestion factor table classified by access-time band, and 502 is area where the priority category classified by time zone and 504 store the category of an access-time band, and 506 stores a circuit congestion factor.

[0023] In drawing 6 , an access frequency comparison table, a user provided information access table, and a category priority table are read (step 600). The value of the category of the beginning of an access frequency comparison table and an access frequency table is compared (step 604), the priority of the category is raised, and a priority is lowered when smaller than the value of a comparison table.

[0024] Moreover, when raising a priority, it already investigates first whether it is whether a priority is high (a value is 0) (step 606), and only when that is not right, 1 is subtracted from the current value of the category to which a category priority table corresponds, and a priority is raised (step 608). Also when lowering a priority, it investigates whether it is the minimum (step 610), and when that is not right, a priority adds 1 to the current value and lowers a priority (step 612). until the category which changes a priority is lost (step 614) -- one by one -- the

access frequency of each category, and a ratio . ** value is compared (step 616).

[0025] Next, as a result of the congestion factor of the accessed time zone, and the above-mentioned processing, the priority of a category with a high priority puts the category of the value of 0 with the highest priority into the next processing preferentially (step 618), changes into the optimization amount of data for a display (step 622), and indicates the result by the client. (Step 624)

[0026]

[Effect of the Invention] As stated above, according to this invention, for an information offer user, without required information never being influenced by the line load, it is displayed from the information that significance is high, and proper information can be acquired at any time.

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	15/00	３２０		15/00	３２０Ｋ

審査請求　未請求　請求項の数４　ＯＬ　（全５頁）

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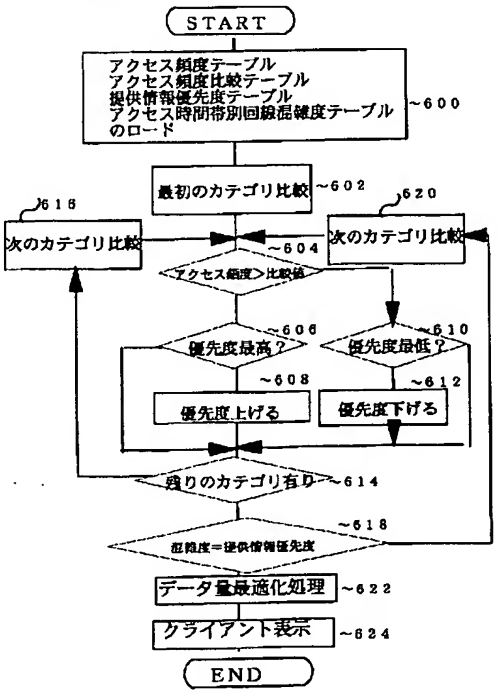
(54)【発明の名称】　アクセス時間帯別表示情報制御装置

(57)【要約】
【課題】優先度の高い情報は、より早く、情報の質を損なわないように、利用者に常に適正な応答で、適正な情報が提供できるようにする。
【解決手段】過去の蓄積された優先度情報の重み付けをアクセスごとに変更し、利用者にとっては、アクセス時点では、その時点での最良のデータの優先順位を上げてかつ、その時の回線混雑状況を加味した形で要求した情報がスムーズに表示する装置を提供する。

図6



【特許請求の範囲】
【請求項１】前記情報提供制御装置より、提供される情報を表示する表示装置に表示された情報をアクセスする時間ごとに適正情報量を制御し、表示する機能を持った制御装置。
【請求項２】前記情報提供制御装置が、情報提供するデータの優先度を付け、情報へのアクセスにより優先度の高い、低いを分類するる機能を持った制御装置。
【請求項３】前記情報提供制御装置が、優先度の変更を入力する機能を備えた制御装置。
【請求項４】前記情報提供制御装置が、提供情報の優先度と回線の混雑度の比較をすることにより、提供情報を適正なデータ量に変換して表示する制御装置。
【発明の詳細な説明】
【０００１】
【発明の属する技術分野】本発明は、情報提供システムに係わり、特に情報提供の受け手側が効率的に情報を表示が行える情報提供制御装置に関する。
【０００２】
【従来の技術】コンピュータを通じて、必要な情報を検索、選択し、表示する情報提供システムにおいては、情報にアクセスする時間帯により、また、情報そのものが持つデータ量により、表示する時間が遅くなったり、回線時間がきれて、タイムアウトしてまうことがあり、対応策として、回線量を増加する方法やあらかじめデータ量そのものを少なくして送信する工夫が行われている。
【０００３】その一つとして、情報量そのものデータ量を少なくする方法として、送信時点であらかじめデータ量が多い画像データを圧縮して送り、そのデータを表示する際にデータ伸張を行うことをしている。
【０００４】その他、情報の表示頻度が高いデータについては、事前に利用者の要求する情報を登録することにより、必要な情報のみ表示する方法がある。
【０００５】また、回線量のパスの太さを大きくすることにより対応する方法もある。
【０００６】
【発明が解決しようとする課題】以上述べた従来技術には、次のような問題がある。
【０００７】情報提供の主な形態は、画像データとテキストデータを伴う提供方法が多いが、表示速度として、アクセス時の回線の負荷状況に依存することがある。
【０００８】前記の方法により、データ自体の情報量を圧縮、伸張する方法は、表示要求を行いたい情報別に上記の処理を選択して行わなければならない。
【０００９】事前に利用者の要求する情報を登録するし、表示する方法は、データ表示速度自体は、表示するデータの属性に依存し、画像データなどのデータ量が多い場合は、解決にならない。
【００１０】以上の結果、情報提供を受ける利用者にとっては、いつでも同じ
【００１１】
【課題を解決するための手段】本発明では、アクセス時間帯により表示する情報を制御する情報提供制御装置が、過去のアクセス履歴を蓄積している情報を参照して、時間帯により適正な情報量を選択し、短時間で利用者の端末に情報を表示させるものである。
【００１２】ここでいう適正な情報量とは、情報量が多くてアクセス要求中に回線よりタイムアウトしない、または、長時間かけて表示しない範囲を示す。
【００１３】
【発明の実施の形態】以下、本発明の１実施例を図面を用いて説明する。
【００１４】図１は、本発明を適用した情報提供制御サーバ装置のシステム構成を示す図である。
【００１５】図１において、１００は、情報提供を制御する情報提供サーバ装置である。１０２は、メインメモリ、１０４は、ディスク装置であって、ディスク装置１０４の中には、アクセス頻度テーブル２００、情報提供優先度テーブル３００、アクセス頻度比較テーブル４００、アクセス時間帯別回線混雑度テーブル６００などが格納されている。１０８は、ディスプレイ、１１０は入力装置であって、情報提供制御装置内のデータの管理及び制御の管理に使用する。１１２は、通信装置であり、公衆回線１３０を介してクライアントとの通信を行う。
【００１６】また、１０６は、これら全てを制御する制御装置である。
【００１７】１２０は、情報提供を受けるクライアントである。１２２は、メインメモリ、１２４は、デイスク装置、１２６は、情報提供サーバ装置との通信を行う通信装置でありディスプレイ１３０、スピーカ１３２、入力装置１２４は、情報提供サーバ装置に対する指示操作と情報提供の内容を出力に使用する。１２８は、これらクライアントの制御を行う制御装置である。但し、この構成は、一例であって、他の構成もありうる。スピーカが無いものやクライアトとして、携帯型端末も考えられる。通信方法としては、公衆回線の他、衛星やＣＡＴＶ(Cable Television)や構内ＬＡＮ(Local Area Network)を使用することも想定される。
【００１８】本実施例では、利用者が情報提供サービスを受ける場合、クライアント１２０から、サーバ１００に指示して情報提供データを送らせ、アクセス状況の記録や提供される情報のデータ量の調整などをサーバ側で行うものとする。
【００１９】図２において、２００は、アクセス頻度テーブルであり、２０２は、情報を識別するＩＤ、２０４は、提供される情報のカテゴリ、２０６は、各カテゴリに含まれる記事へのアクセス頻度を格納するエリアである。
【００２０】図３において、３００は、情報提供優先度テーブルであり、３０２は、情報カテゴリの種類、３０

４がカテゴリ名称、３０６は、カテゴリに含まれる情報を表示する時に使用する優先度が格納されるエリアである。

【００２１】図４において、４００は、アクセス頻度比較テーブルであり、ディスク装置１０４に格納されている。４０２は、カテゴリの種類、４０４は、カテゴリ名称、４０６は、アクセス頻度の期待値とする。

【００２２】図５において５００は、アクセス時間帯別回線混雑度テーブルであり、５０２は、時間帯別優先カテゴリ、５０４は、アクセス時間帯のカテゴリ、５０６は、回線混雑度を格納するエリアである。

【００２３】図６においてアクセス頻度比較テーブルと利用者提供情報アクセステーブル、カテゴリ優先度テーブルを読み込む（ステップ６００）。アクセス頻度比較テーブルとアクセス頻度テーブルの最初のカテゴリの値を比較し（ステップ６０４）、そのカテゴリの優先度を上げ、比較テーブルの値より小さい場合は、優先度を下げる。

【００２４】また、優先度を上げる場合、まず、既に優先度が高いか（値が０）かを調べ（ステップ６０６）そうでない場合のみ、カテゴリ優先度テーブルの該当するカテゴリの現在値から１を引いて優先度を上げる（ステップ６０８）。優先度を下げる場合も優先度が最低かどうかを調べ（ステップ６１０）、そうでない場合に、現在の値に１を加えて優先度を下げる（ステップ６１２）。優先度を変更するカテゴリが無くなるまで（ステップ６１４）、順次各カテゴリのアクセス頻度と比．較値を比較する（ステップ６１６）。

【００２５】次にアクセスした時間帯の混雑度と前述処理の結果優先度の高いカテゴリの優先度が最も優先度が高い、０の値のカテゴリを優先的に次の処理へ移し（ステップ６１８）、表示のための最適化データ量に変換し（ステップ６２２）、結果をクライアント表示する。（ステップ６２４）

【００２６】

【発明の効果】以上述べたように本発明によると、情報提供利用者にとっては、いつでも必要な情報を回線負荷に影響されずに、かつ重要度の高い情報から表示され、適正な情報をいつでも得ることができる。

【図面の簡単な説明】

【図１】本発明を適用した情報提供制御サーバ装置のシステム構成の1例を示す図である。

【図２】本発明を適用したアクセス頻度テーブルにおいて、提供させる情報カテゴリ別にアクセス頻度をテーブルに示した１例である。

【図３】本発明を適用した情報提供優先度テーブルにおいて、各カテゴリ別に優先度をテーブルに示した１例である。

【図４】本発明を適用したアクセス頻度比較テーブルにおいて、アクセス頻度とアクセス期待値を比較するための１例のテーブルである。

【図５】本発明を適用したアクセス時間帯別回線混雑度テーブルにおいて、アクセス時間帯別の混雑度を示した１例である。

【図６】本発明を適用したアクセス頻度比較テーブルと利用者提供情報アクセステーブルにおいて、提供情報の優先度の最も高いものを選別し、混雑度に応じたデータ量に変換してクライアントに表示するまでの流れを示したものである。

【符号の説明】

１００…情報提供制御サーバ、　２００…アクセス頻度テーブル、３００…情報提供優先度テーブル、４００…アクセス頻度比較テーブル、５００…アクセス時間帯別回線混雑度テーブル、６００…アクセス頻度比較テーブルと利用者提供情報アクセステーブル。

【図２】

図２

200

項目	カテゴリ名	アクセス頻度
新製品	車	１５０
	自転車	１７８
部品	タイヤ	２５０

202　204　206

【図３】

図３

300

項目	カテゴリ名	優先度
新製品	車	0
	自転車	2
部品	タイヤ	5

302　304　306

【図４】

図４

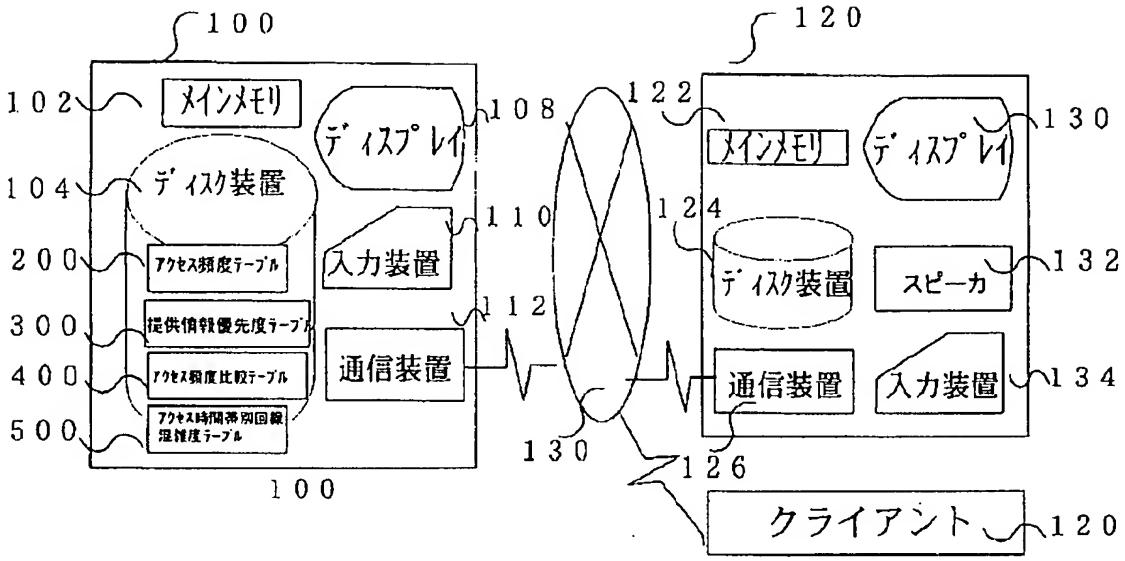
400

項目	カテゴリ名	アクセス期待値
新製品	車	２８０
	自転車	１５０
部品	タイヤ	１２０

402　404　406

【図１】

図1



【図５】

図5

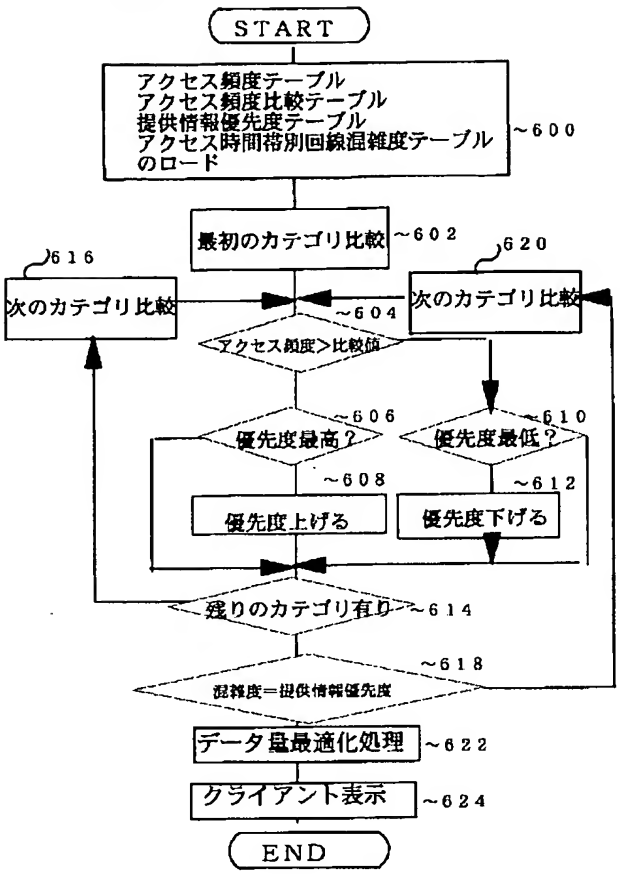
５００

項目	アクセス時間帯	混雑度
最優先	07：00～0730	0
	23：00～23：30	0
	01：00～01：30	0
次優先	21：00～21：30	1

５０２　５０４　５０６

【図６】

図6



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